



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,749	09/18/2003	Ozgur Yildirim	200311400-1	8007
22879	7590	09/20/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			FEGGINS, KRISTAL J	
		ART UNIT	PAPER NUMBER	
		2861		

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/666,749	YILDIRIM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	K. Feggins	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-40 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1-40 is/are allowed.
- 6) Claim(s) \_\_\_\_\_ is/are rejected.
- 7) Claim(s) 1 and 29 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 18 September 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9/18/2003</u> .	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, (1) moving a bubble located between the ejection chambers and the filter to a region where the bubble can pass through the filter; and (2) moving pre-existing bubble located between the electrical components and the filter to a location where the bubble can pass through the filter must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claims 1 & 29 are objected to because of the following informalities: claim 1 refer to moving a bubble located between the ejection chambers and the filter to a region where the bubble can pass through the filter, and claim 2, refer to moving a pre-existing bubble located between the electrical components and the filter to a location where the bubble can pass through the filter. However, in both instances if the bubble is already between the ejection chambers or the electrical components and the filter, the bubble has already passed through the filter. Appropriate correction is required.

Claim 33 recites the limitation "the processor" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 34 recites the limitation "the processor" in line 8. There is insufficient antecedent basis for this limitation in the claim.

***Allowable Subject Matter***

3. Claims 1-40 are allowed.

The following is an examiner's statement of reasons for allowance: The primary reason for allowance of claims 17-23 is the inclusion of the limitations of a fluid ejecting system that includes a processor configured to cause an individual resistor to be energized at a first intensity sufficient to eject fluid from a respective ejection chamber, the processor further configured to cause the resistor to be energized at a second lower intensity which heats the resistor but does not cause fluid to be ejected from the

respective ejection chamber, and wherein the processor can energize, at the second lower intensity level, individual resistors in a pattern designed to detach a bubble from a surface defining a portion of the fluid-feed channel. It is this limitation found in the claims, as it is claimed in the combination of that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for allowance of claims 24-28 is the inclusion of the limitations of a printing device that includes a controller configured to cause energizing and resultant heating of at least some of the multiple electrical components in a bubble moving pattern designed to move a bubble in a desired direction within the fluid-feed channel, wherein said energizing does not cause fluid to be ejected from the print head. It is this limitation found in the claims, as it is claimed in the combination of that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for allowance of claim 33 is the inclusion of the limitations of computer readable media that includes a processor is configured to energize the first electrical component and the at least one different electrical component in a pattern designed to move a bubble in a desired direction within the micro electro mechanical systems device. It is this limitation found in the claims, as it is claimed in the combination of that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for allowance of claim 34 is the inclusion of the limitations of computer readable media that includes a processor is configured to energize the second set of electrical component in a pattern designed to move a bubble in a desired direction within the micro electro mechanical systems device. It is this limitation found in the claims, as it is claimed in the combination of that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for allowance of claims 35-40 is the inclusion of the limitations of a device that includes means for heating fluid contained in the fluid-delivery device in a contaminant moving pattern designed to move a contaminant contained in the fluid-ejecting device without ejecting fluid from the fluid-delivery device. It is this limitation found in the claims, as it is claimed in the combination of that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Morita et al. (5708465) disclose a thermal ink jet head designed to improve operating frequency by trapping foreign substances. Okashi et al. (US 6,752,489 B2) disclose a liquid ejection head having a plurality of opened liquid flow passages arranged side by side and communicating with ejection orifices. Kitahara (US 6,695,442 B2) disclose an ink jet head having structure for eliminating air bubbles.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### **Communication With The USPTO**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Feggins whose telephone number is 571-272-2254. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talbott Dave can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*K. Feggins - 9/05-*  
K. FEGGINS  
PRIMARY EXAMINER